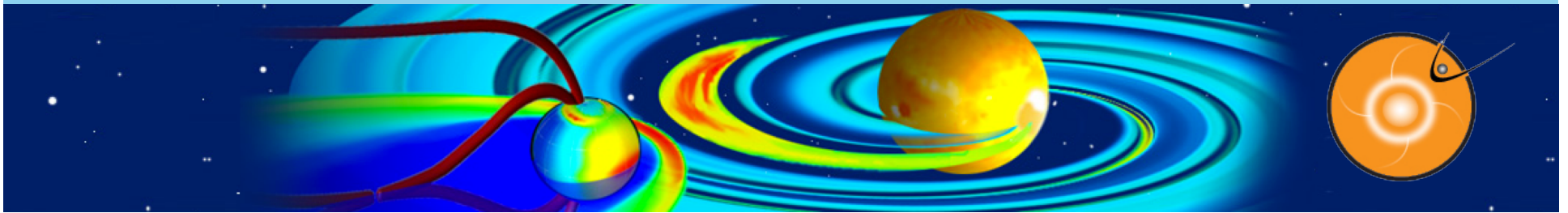


Community Coordinated Modeling Center (CCMC)



Introduction to Space Weather: Tools and Concepts

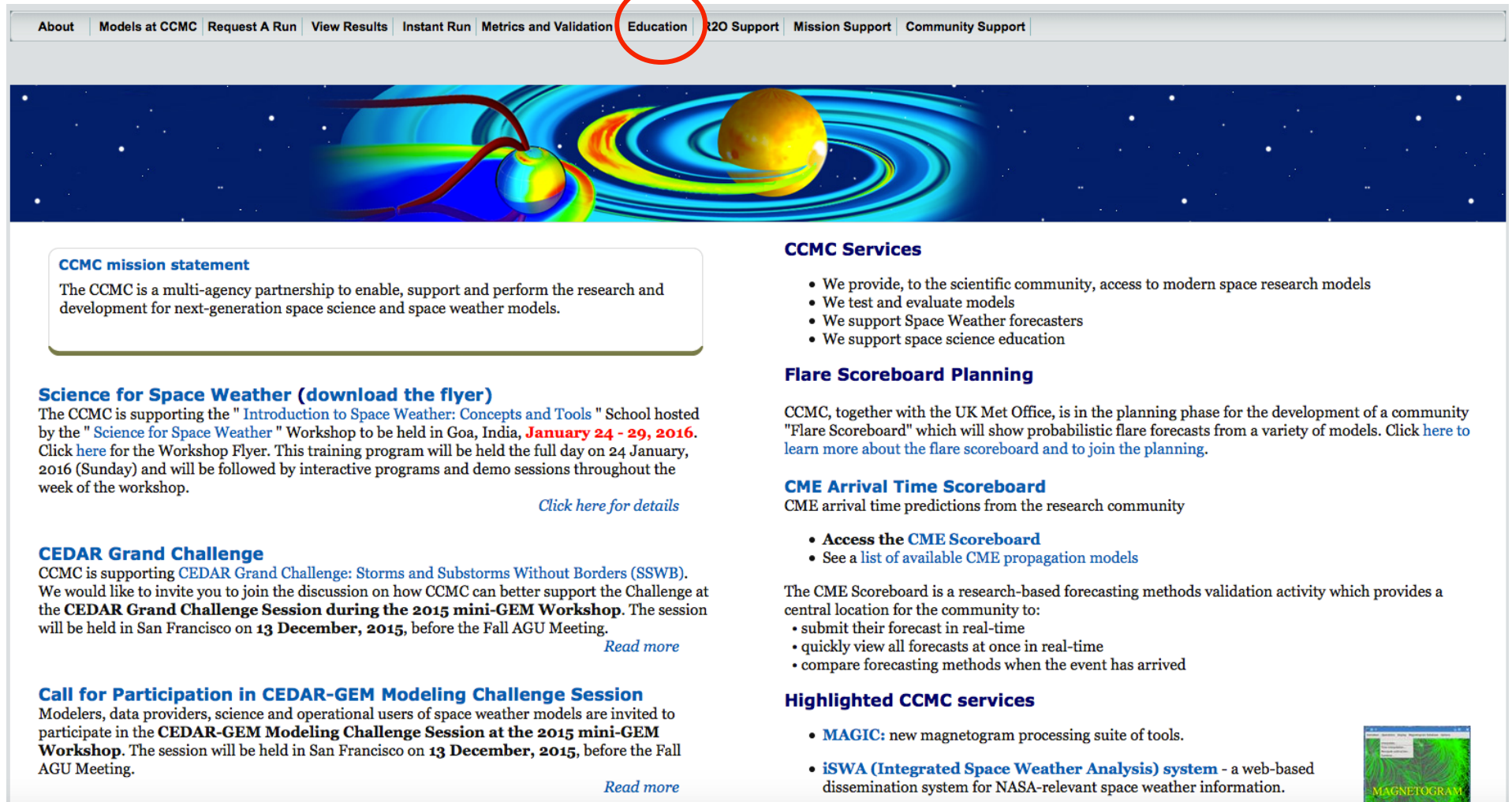
CCMC Runs-on-Request : Ionosphere/Thermosphere Models

Ja Soon Shim & CCMC Team

Science for Space Weather, Jan 24 – 29, 2016, Goa, India



http://ccmc.gsfc.nasa.gov



The screenshot shows the CCMC website interface. At the top, a navigation bar contains links: About, Models at CCMC, Request A Run, View Results, Instant Run, Metrics and Validation, Education, R2O Support, Mission Support, and Community Support. The 'Education' link is circled in red with an arrow pointing to it from the URL above. Below the navigation bar is a large banner image depicting a solar system with a yellow sun, a blue planet, and a red comet. The main content area is divided into two columns. The left column features a 'CCMC mission statement' box, a 'Science for Space Weather' section with a flyer download link, a 'CEDAR Grand Challenge' section, and a 'Call for Participation in CEDAR-GEM Modeling Challenge Session'. The right column features 'CCMC Services', 'Flare Scoreboard Planning', 'CME Arrival Time Scoreboard', and 'Highlighted CCMC services'. A small thumbnail image of a magnetogram is visible in the bottom right corner of the website screenshot.

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Science for Space Weather (download the flyer)
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CME arrival time predictions from the research community

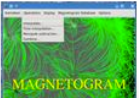
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Highlighted CCMC services

- **MAGIC:** new magnetogram processing suite of tools.
- **iSWA (Integrated Space Weather Analysis) system** - a web-based dissemination system for NASA-relevant space weather information.



Local Network: http://10.0.1.5/

Educational Materials on CCMC Web

Educational materials

Upcoming event (January 24, 2016):

Introduction to Space Weather: Concepts and Tools

School hosted by the Science for Space Weather Workshop to be held in in Goa, India, January 24 - 29, 2016

CCMC Student Research Contest

Illustrating space science using CCMC runs

Educational materials created by G.Siscoe on the basis of CCMC runs.

- Properties of Magnetic Dipoles
- Modules on Magnetospheric Physics
- Database of general purpose runs for education and research

Space Weather Research, Education and Development Initiative (SW REDI)

- Tutorials from the latest space weather training camp
- How to apply for future space weather internship opportunities

Heliophysics Summer Schools

- **Heliophysics Summer School 2015**
- Heliophysics Summer School 2014
- Heliophysics Summer School 2013
- Heliophysics Summer School 2012
- Heliophysics Summer School 2011
- Heliophysics Summer School 2010
- CCMC user help

UAH Space Weather Summer Schools

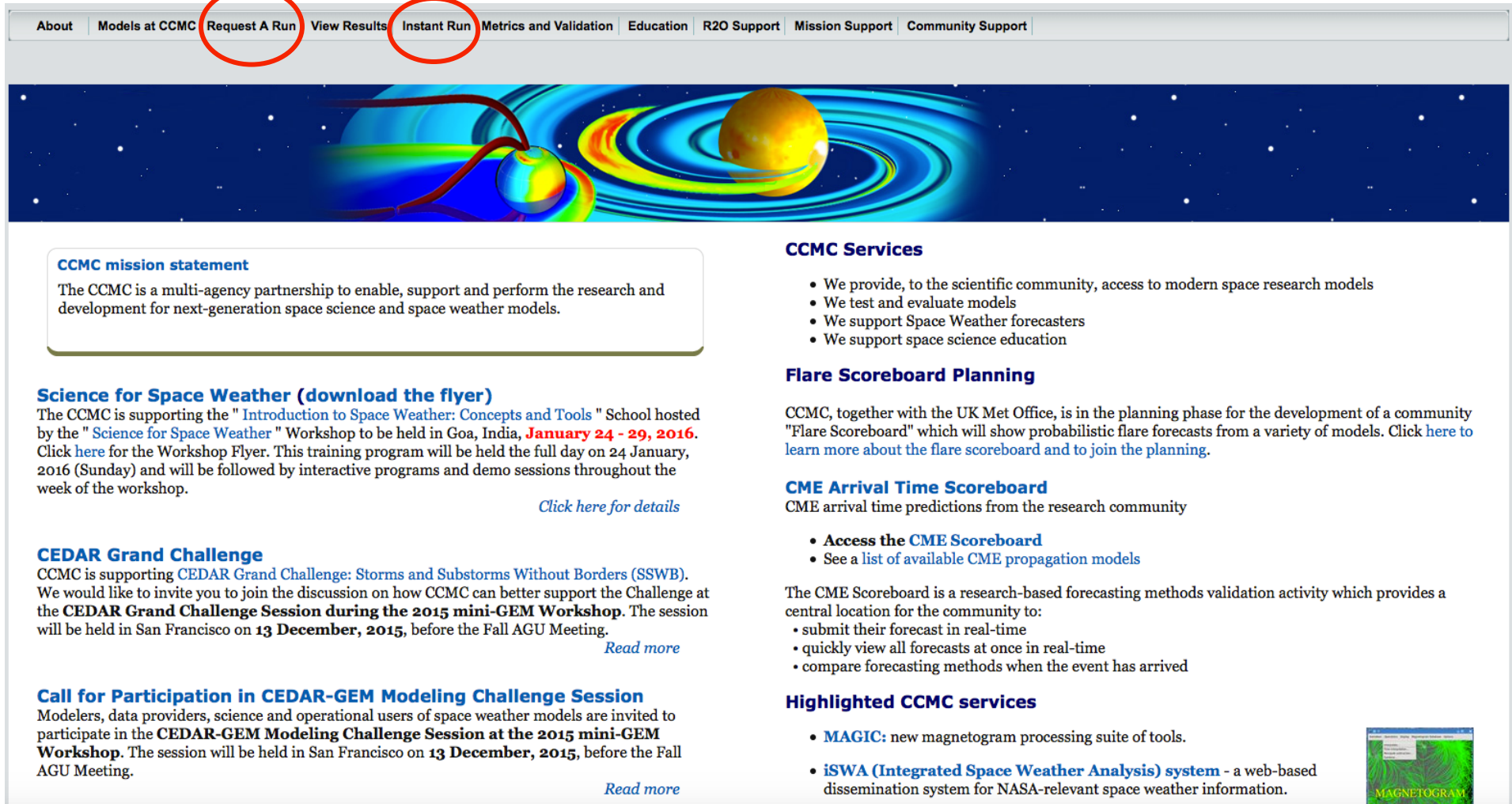
- UAH Space Weather Summer School 2013

Repository of educational materials

- Tutorials from the latest space weather training camp
- CUA Space Weather Academy space weather tutorials *by Antti Pulkkinen*
- Images and Movies
- Space Weather Terms Glossary

CCMC Tutorial at CEDAR

http://ccmc.gsfc.nasa.gov



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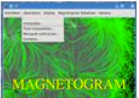
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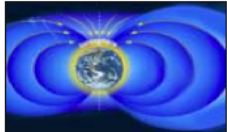
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Ionosphere/Thermosphere (IT) Models

Runs-on-Request

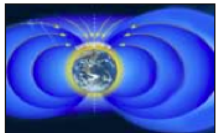
IONOSPHERE



SAMI3	Joseph Huba, Glenn Joyce, Marc Swisdak	Ionosphere run instructions	Request A Run
CTIPe	Timothy Fuller-Rowell et al	Ionosphere run instructions	Request A Run
USU-GAIM	R.W. Schunk, L. Scherliess, J.J. Sojka, D.C. Thompson, L. Zhu	Ionosphere run instructions	Request A Run
Cosgrove-PF	Russel B. Cosgrove	Ionosphere run instructions	Request A Run
Weimer	Daniel R. Weimer	Ionosphere run instructions	Request A Run
Ovation Prime	Patrick Newell	Ionosphere run instructions	Request A Run
TIE-GCM	R. G. Roble et al.	Ionosphere run instructions	Request A Run
GITM	A.J. Ridley et al.	Ionosphere run instructions	Request A Run

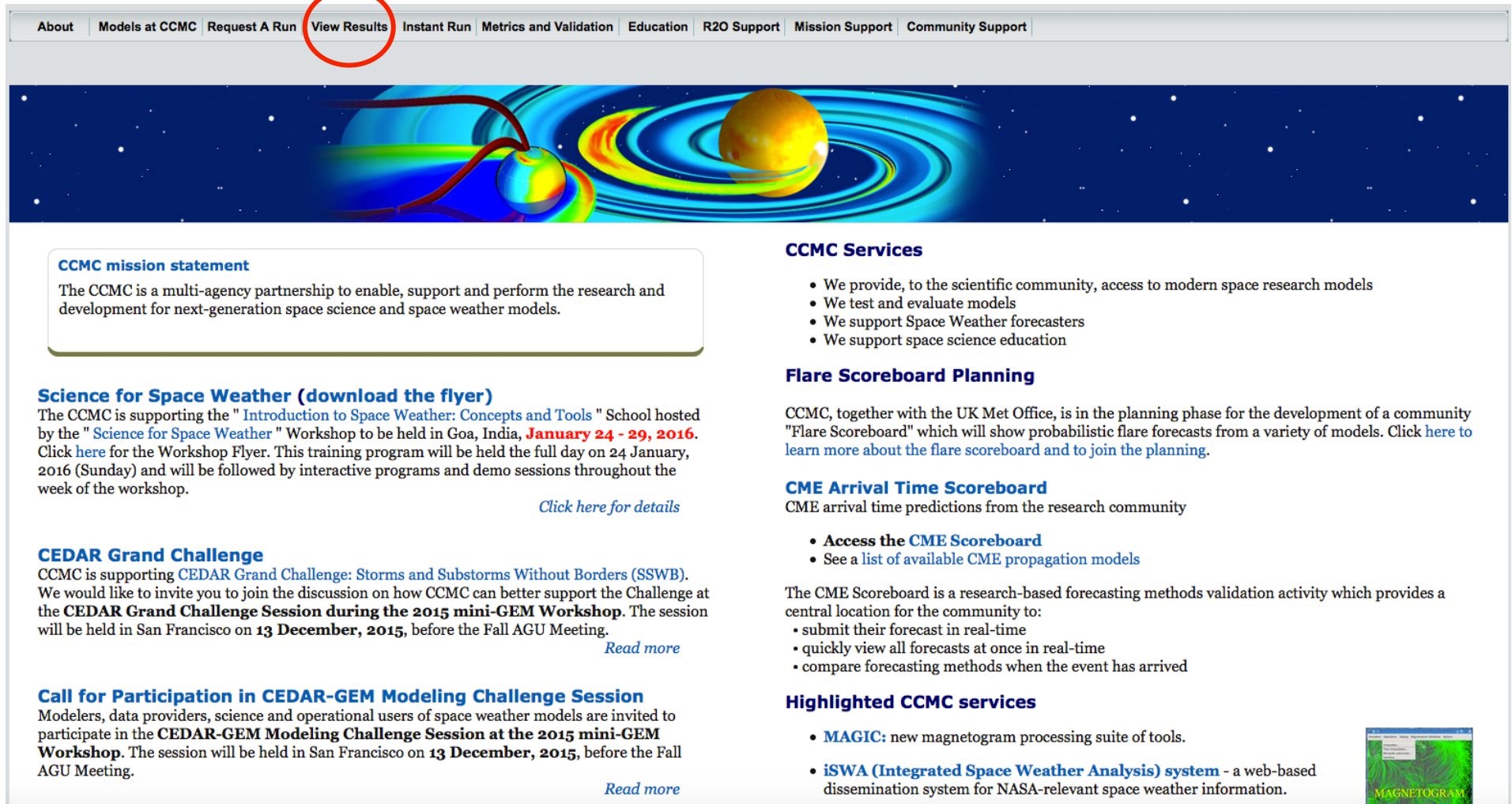
Instant Run

IONOSPHERE



ABBYNormal	J. Vincent Eccles et al.	CASS/USU (Space Environment Corp.)	Instant Run
IRI	D. Bilitza, NASA/GSFC	URSI/COSPAR Working Group on IRI	Instant Run
Weimer	Daniel R. Weimer	Virginia Tech	Instant Run
MSISE	A. E. Hedin	retired from. NASA, GSFC	Instant Run

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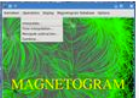
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Search IT Model Request Database

View Results of Requested Runs

View the results of your requested run as well as the results of runs submitted by other users.

CCMC Publications Policy

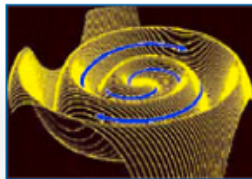
If you use the results from the Runs on Request in a scientific publication or presentation, please acknowledge the originators of the computational model and the CCMC. For more details see the detailed [policy description](#).

Note: For tracking purposes for our government sponsors, we ask that you notify the CCMC whenever you use CCMC results in scientific publications or presentations by [emailing CCMC](#).

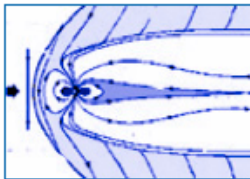
[Click Here](#)



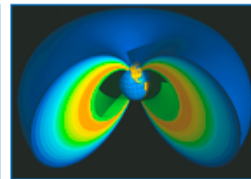
**Solar Models
Results**



**Heliosphere
Models Results**



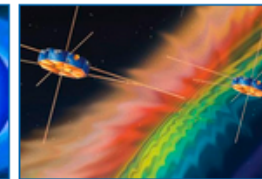
**Global
Magnetosphere
Models Results**



**Inner
Magnetosphere
Models Results**



**Ionosphere /
Thermosphere
Models Results**



**Local Physics
Models Results**

View Simulations of Special Sun-Earth Connection Events

Search the Simulation Results Database

Search and view [simulation results](#) for all model runs executed at the CCMC over the last four years. We maintain a comprehensive searchable and sortable database of all executed runs.